What is claimed is:

1. An antagonist of interleukin-15 (IL-15) activity that prevents IL-15 from transducing a signal through either of the ß- or γ-subunits of the IL-15 receptor complex, such IL-15 antagonist is not a monoclonal antibody against the IL-2 receptor complex.

2. An antagonist according to claim 1, that is selected from the group consisting of:

(a) a mutein of native IL-15 capable of binding to the IL-15 α–subunit and incapable of transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex;

(b) a monoclonal antibody against IL-15 that prevents IL-15 from transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex;

(c) a conjugated IL-15 molecule, wherein mature IL-15 is covalently bonded to a large inert moiety selected from the group consisting of PEG, mPEG, PVP and dextran; the conjugated IL-15 molecule being capable of binding to the IL-15R α–subunit and incapable of transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex.

3. An antagonist according to claim 2, that is a mutein of IL-15 wherein at least one of the amino acid residues Asp^{56} or Gln^{156} either is deleted or is substituted with a different naturally-occurring amino acid residue.

4. An antagonist according to claim 3, wherein either or both of Asp^{56} and Gln^{156} are each substituted with a serine or cysteine.

5. An antagonist according to claim 4, wherein Asp^{56} is substituted with serine or cysteine.

6. An antagonist according to claim 4, wherein Gln^{156} is substituted with serine or cysteine.

7. An antagonist according to claim 2 that is a monoclonal antibody against IL-15 that prevents IL-15 signal transduction through the ß- or γ-subunits of the IL-15 receptor complex.

8. An antagonist according to claim 7, that is a monoclonal antibody obtained from the hybridoma having ATCC accession number _____.

9. An antagonist according to claim 7, that is M110.

10. An antagonist according to claim 7, that is M111.

11. An antagonist according to claim 7, that is M112.

12. An isolated nucleic acid sequence that encodes a mutein of IL-15 according to claim 2.

13. An isolated nucleic acid according to claim 12, wherein the mutein of IL-15 has at least one of the amino acid residues Asp^{56} or Gln^{156} deleted or substituted with a different naturally-occurring amino acid residue.

14. An isolated nucleic acid according to claim 13, wherein either or both of Asp^{56} and Gln^{156} are each substituted with a serine or cysteine.

15. An isolated nucleic acid according to claim 13, wherein Asp^{56} is substituted with serine or cysteine.

16. An isolated nucleic acid according to claim 13, wherein Gln^{156} is substituted with serine or cysteine.

17. A recombinant vector that comprises a nucleic acid of claim 12.

18. A host cell transformed or transfected with the vector of claim 17.

19. A method of producing an IL-15 mutein according to claim 2, comprising culturing a host cell according to claim 18 under culture conditions that are conducive to expression of such IL-15 mutein.

20. A pharmaceutical composition comprising an amount of an antagonist according to claim 1 effective to inhibit IL-15 activity, and a pharmaceutically acceptable carrier or diluent.

21. A pharmaceutical composition according to claim 20, wherein the antagonist is a mutein of native IL-15 capable of binding to the IL-15Rα–subunit and that is incapable of transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex.

22. A pharmaceutical composition according to claim 20, wherein the antagonist is a monoclonal antibody against IL-15 that prevents IL-15 from transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex;.

23. A pharmaceutical composition according to claim 20, wherein the antagonist is an IL-15 molecule that is covalently bonded with PEG and that is capable of binding to the IL-15Rα–subunit and that is incapable of transducing a signal through the ß- or γ-subunits of the IL-15 receptor complex, and a pharmaceutically acceptable carrier or diluent.

24. A method for treating a patient having symptoms of graft-versus-host disease comprising administering a pharmaceutical composition according to claim 20.

25. A method for prolonging allograft survival in a patient in need thereof. comprising administering a pharmaceutical composition according to claim 20.

add B'

add C'